NOTE IV.

ON THE SYNONYMY OF PHERECARDIA LOBATA HORST

BY

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(With 1 text-figure).

In my paper »Contributions towards the knowledge of the Annelida polychaeta, I: Amphinomidae" 1) I was the first to describe the genus *Pherecardia*, characterized by having a caruncle, composed of a median heart-shaped axis, that bears on each side several (7) folded lobes of a lamelliform shape and directed backward. A tuft of short cylindrical branchial filaments occurs on each body-ring and the bristles of the ventral fascicles are not bifurcated, but provided with a hooklike bend tip, whereas the dorsal ones are partly capillary, partly stout, with serrations, having the shape of an Y. It was based on a badly preserved specimen, of which the locality was unknown, but in 1902 Collin mentioned it in his »Verzeichniss der von Prof. Semon bei Amboina und Thursday Island gesammelten Polychäten" 2), however without giving any peculiarity about the specimen he examined.

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1) Notes from the Leyden Museum, Vol. VIII, 1886, p. 157, pls. 7 and 8. — Unfortunately this paper was overlooked by several authors (Gravier, Fischli, Potts a. o.) though it was duly referred by Jeffrey Bell in the Zoological Record for 1886, Vermes, pp. 11 and 14.

2) Semon, Zoolog. Forschungsreisen in Australien und dem Malayischen Archipel, 1902.

A year later 1903, Fischli published an account of the »Polychäten von Ternate", collected by Kükenthal [1]; among them he described and figured a new species, *Amphinome sericata*, characterized by the presence of a caruncle consisting of a median axis and 8 lateral folded lamellae, whereas the dorsal bristle-fascicle shows the particular harpoon-like setae above referred to. It appears to me to be without doubt, that this worm must be identified with my *Pherecardia lobata*, and I cannot very well understand how the author could range this annelid in the genus *Amphinome*, that has a small, faintly developed caruncle and branchiae which only commence on the 3rd or 4th segment.

In 1907 Malaquin and Dehorne [2]) gave an enumeration of the Polychaetous Annelids from the bay of Amboina, collected by Bedot and Pictet, in which a new genus and species of Amphinomidae, *Eucarunculata Grubei*, is elaborately described; it is characterized by the presence of arborescent gills and a large heart-shaped caruncle, composed of a median axis and several lateral ridges, of a single dorsal cirrus and of only simple setae. As already announced in the »Zoologischer Anzeiger vom 18. Mai 1909" this species probably is also identical with or at least closely allied to my *Pherecardia lobata*; there are some slight differences in the description of both species, that will be discussed afterwards.

In the following year this species was met with by Potts amidst the Polychaeta of the Indian Ocean, collected during the Percy Sladen Trust-expedition and also in Crossland's collection from Zanzibar [3]); moreover he described two varieties of *Eucarunculata Grubei*, var. *gracilis* and var. *minuta*, differing not only by their colour but also by a smaller number of folds of the caruncle and a shorter median antenna.

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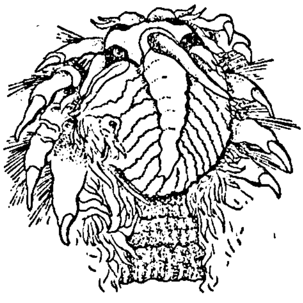
1) Abhandl. Senckenberg. Naturf. Gesellschaft, Bd. XXV.

2) Revue Suisse de Zoologie, vol. XV, p. 335, pls. 51—58.

3) Transact. Linnean Society London, Zoology, (2) vol. XII, p. 365.

Perhaps also Kinberg's *Hermodice striata* [1]), from Eimeo, belongs to the genus *Pherecardia,* with which it agrees in the singular structure of the dorsal setae; moreover it has its ventral bristles not bifurcated nor the caruncle-lamellae directed forward like in *Hermodice.*

Lately I had the opportunity to examine three rather well preserved specimens of *Pherecardia lobata,* collected near Poeloe Weh by Mr. G. A. J. van der Sande. The largest specimen, somewhat twisted together, measures about 90 to 100 mm. in length; the number of its segments amounts to 87. — The body has the general appearance of an Eurythoë; the bristle-fascicles look silky. The dorsal side is strongly wrinkled, pale violet, with a fine white line around each fold, whereas an other specimen presents the dark longitudinal bands mentioned by Malaquin and Dehorne. Potts speaks of longitudinal stripes of a bronze colour; but this different colour much depends, in my opinion, on the manner of preservation. A dark violet band occurs around each notopodium and there is a series of longitudinal violet spots in the median ventral line. The neuropodial bristle-fascicles are much more developed than the notopodial ones. The dorsal cirrus, nearly as long as the dorsal setae, consists of a dilated (»tonnenförmiges" Fischli) basal joint and a slender distal part of about the same length. The ventral cirrus, reaching only to half the length of the bristle-fascicle, consists of a short thick basal joint and a longer tapering distal one. The branchiae, commencing on the first segment, are strongly developed;



Pherecardia lobata Horst.
Anterior part of the body, 6 ×

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1) Öfversigt Kongl. Vetensk.-Akad. Forhandl. 1857, p. 13; Kongl. Svenska Freg. Eugenies resa omkring Jorden, Zoologi, pl. XII, fig. 8.

they consist of a dichotomously branched stem, situated behind and at the median side of the dorsal bristle-fascicle.

The prostomium has a syncipital region, that is somewhat rectangular with rounded lateral sides, bearing four large indistinct violet eyes, the posterior of which are the largest; from its middle the stout unpaired antenna, that measures half the length of the caruncle, arises. In front of it lies the palpar region, emarginated in the shape of a V, with two small paired antennae on each side [1]). Malaquin and Dehorne describe this part of the head as four-lobed; perhaps this was caused by the state of contraction of the animal.

The large heart-shaped caruncle covers the total dorsal side of the four anterior segments and extends till upon the fifth one. Like in *Hermodice* it consists of a median axis and a number of lateral lamellae, that are however directed backward and not forward like in that genus. The axis is a wedge-shaped ridge, with crenulated borders, that is provided on each side with 10 or 11 lamelliform appendages; these lamellae have both sides furnished with parallel vertical folds. In the specimen, examined by Malaquin and Dehorne, these folds are described as branched ridges; I dare not state whether this must be considered as a specific character, or if it may represent an abnormality, because their specimen bears another small superfluous caruncle at the right side of the median axis.

The mouth appears to be bounded laterally and posteriorly by the anterior four segments [2]). The anus is a slit-like aperture, bounded ventrally by a knob-shaped papilla.

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[1]) According to Racovitza (Arch. Zool. Expér. 3e sér. vol. IV) in *Eurythoë* and *Euphrosyne* the anterior pair of antennae should represent the stylodes of the palpi; Malaquin and Dehorne however demonstrated, that this does not hold for *Notopygos* and *Pherecardia (Eucarunculata)*, in which the organs are independent from the palpi and innerved from the dorsal side of the encephalon.

[2]) I do not understand why Racovitza (loc. cit. p. 184) disapproves this manner of expression of systematical Annelidologists, for, though in Amphinomidae as in other Annelids the roof of the mouth-cavity may be formed by the first (buccal) segment, yet he cannot deny that in this family also other segments take part in the external bordering of the mouth-opening.

The ventral bristle-fascicle contains: 1°. short hastate spines; 2°. rather stout, long bristles with a yellow tip and a hook-like bend distal extremity with a number of indistinct denticulations beneath it and dimples over the distal part of their shaft (Mal. a. Deh. loc. cit. pl. 53, figs. 19 and 20); 3°. capillary bristles, somewhat longer than the foregoing, with small denticulations along their total length (Mal. a. Deh. loc. cit. pl. 53, fig. 18). In the specimens examined by Potts, those bristles probably were lost, for he says: »there is but a single type«, meaning the second one; about the variety *minuta* is stated: »a second type, apparently derived by excessive elongation from the first, is met with, but rarely«.

The dorsal setae are of two kinds: 1°. stout, harpoon-like bristles with strong serrations having the shape of an Y (Mal. a. Deh. loc. cit. pl. 53, fig. 13); 2°. smooth bristles, in their basal part about of the same dimension as the preceding ones, but with a long, fine distal extremity, furnished with small serrations like the third kind of ventral bristles.

Leyden Museum, September 1911.